

GENERAL PERMIT WMGM049

BENEFICIAL USE OF TREATED WASTEWATER AT COMBINED CYCLE POWER PLANT FACILITIES

A. Description.

1. This general permit authorizes the beneficial use of reclaimed water as non-contact cooling and/or process water at natural gas-fired combined cycle electric generating facilities.
2. Definitions. For purposes of this general permit, the following words and terms have the following meanings:

Reclaimed water - Treated wastewater generated by a wastewater treatment facility or treatment process under an NPDES permit or a Water Quality Management; used in accordance with applicable guidelines for beneficial purpose as a substitute for water withdrawn from surface or groundwater and discharged at and downstream of the delivery point after beneficial use.

Delivery point - The point at which treated effluent meeting reclaimed water standards is delivered to the system that conveys the reclaimed water to the combined cycle generating plant.

B. Registration Requirements.

A person or municipality that proposes to operate under the terms and conditions of this general permit after the date of permit issuance must obtain a registration from the appropriate Department Regional Office (see attached list) prior to commencing authorized activities under this general permit. A completed (i) General Information Form (Authorization Application for a Residual or Municipal Waste General Permit Application), (ii) Form B (Professional Certification), (iii) Form 20 (Application For A Municipal or Residual Waste General Permit), (iv) Form 27M (Acceptance of General Permit Conditions), and (v) a registration application fee in the amount identified in Section A (General Information) of the Form 20 must be submitted to the appropriate Department Regional Office. A check shall be made payable to the "Commonwealth of Pennsylvania". No activities shall commence unless approved, in writing, by the Department.

C. Operating Requirements.

1. Prior to reuse, the reclaimed water shall meet the Class C Reclaimed Water standards provided on page 8 of in the Department's *Reuse of Treated Wastewater Guidance Manual*, No. 385-21888-002. The Class C Reclaimed Water standards are listed in the table below:

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Class C Reclaimed Water Standards

Parameter	Treatment Standard ^{(a),(b)}		Monitoring Frequency
	Monthly Average	Maximum	
BOD	<30 mg/L	45 mg/L	Weekly
TSS	<30 mg/L	45 mg/L	Weekly
Fecal Coliform ^(c)	<200 / 100 mL	800 / 100 mL	Weekly

Notes:

- a) Where chlorine is utilized for disinfection, a total chlorine residual of at least 1.0 mg/L should be maintained for a minimum contact time of 30 minutes at design average flow. The treatment facility should provide continuous on-line monitoring for chlorine residual. There should be a detectable chlorine residual (>0.02 mg/L) at the point of reuse application.
 - b) Where ultraviolet light is used for disinfection, a design dose of $\geq 75 \text{ mJ/cm}^2$ under maximum daily flow should be used. The design dose may be reduced to $\geq 60 \text{ mJ/cm}^2$ for porous membrane filtration, and $\geq 40 \text{ mJ/cm}^2$ for semi-permeable membrane filtration. This dose should also be based on continuous monitoring of lamp intensity, UV transmittance and flow rate.
 - c) A fecal coliform standard is only necessary for municipal and residual wastewater that has been in contact with fecal matter or animal parts.
2. Nothing in this general permit shall be construed to supersede, amend, or authorize a violation of any of the provisions of any valid and applicable law, ordinance, or regulations, providing that said local law, ordinance, or regulation is not preempted by the Solid Waste Management Act, 35 P.S. §§ 6018.101 - 6018.1003; Municipal Waste Planning, Recycling and Waste Reduction Act, 53 P.S. §§ 4000.101 - 4000.1904; Air Pollution Control Act, 35 P.S. §§ 4001 - 4015; Waste Transportation Safety Act, 27 Pa. C.S. §§ 6201 - 6209; Oil and Gas Act, 58 P.S. §§ 601.101 – 601.605; Radiation Protection Act, 35 P.S. §§ 7110.101 - 7110.703 and The Clean Streams Law, 35 PS §§ 691.1 – 691.1001.
 3. The beneficial use authorized by this general permit shall not harm or present a threat of harm to the health, safety, or welfare of the people or environment of this Commonwealth. The Department may:
 - a. Modify, suspend, revoke, or reissue the authorization granted in this general permit if the permittee cannot comply with the conditions of this general permit or if the authorized beneficial use activities cannot be adequately regulated under the conditions of this general permit.
 - b. Require a person or municipality authorized by a general permit to apply for, and obtain, an individual permit when the person or municipality is not in compliance with the conditions of the general permit or is conducting an activity that harms or presents a threat of harm to the health, safety or welfare of the people or the

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environment of this Commonwealth.

4. Failure of measures herein approved to perform as intended, or as designed, or in compliance with the applicable laws, rules, and regulations and terms and conditions of this general permit, for any reason, shall be grounds for the revocation or suspension of the permittee's approval to operate under this general permit.
5. The permittee shall not cause or allow a point or non-point discharge of any of the following: residual and municipal wastes; wastewater; combined storm water runoff and leachate, if generated; or runoff from the staging and loading/transfer facility where solid waste management activities are conducted; to the surface waters of the Commonwealth, unless permitted by the Department.
6. The permittee shall not mix the reclaimed water that is beneficially used under this general permit with other types of waste materials, including hazardous waste, residual waste, special handling waste, or other municipal waste, unless otherwise approved by the Department in writing.
7. At a minimum, the treated effluent shall be monitored in accordance with the provisions of the applicable NPDES Permit or Water Quality Management Permit, and weekly inspections shall be conducted of any storage tanks or pumping facilities storing or conveying treated effluent prior to the delivery point, to determine compliance with the terms and conditions of this general permit, and for evidence of failure.
8. The conveyance of the reclaimed water that is generated shall be contained/conducted in a manner that will not create a nuisance or be harmful to the public health, safety or the environment of this Commonwealth.
9. Prior to beneficial use, the reclaimed water shall be managed in accordance with 25 Pa. Code Chapter 285 or Chapter 299 (relating to storage and transportation) unless otherwise approved by the Department as part of the NPDES Permit or Water Quality Management Permit. The reclaimed water shall be managed as a waste until it is used in the cooling tower basin of the combined cycle power plant.
10. The reclaimed water shall be transported in compliance with federal and state rules and regulations relating to transportation.
11. The permittee shall comply with the applicable provisions of 25 Pa. Code, Chapter 123 (Standards for Contaminants) issued under the Air Pollution Control Act, the Act of January 8, 1960, P.L. 2119, 35 P.S. §4005 and shall comply with all the applicable provisions of the Fugitive Emissions Sections 123.1, 123.2, and 123.31
12. As a condition of this permit and of the permittee's authority to conduct the activities authorized by this permit, the permittee hereby authorizes and consents to allow authorized employees or agents of the Department, without advance notice or search warrant, upon presentation of appropriate credentials and without delay, to have access to and to inspect all areas on which waste management activities required of the permittee are being, will be, or have been conducted. This authorization and consent shall include consent to collect samples of waste, soils, water, or gases; take

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photographs; to perform measurements, surveys, and other tests; inspect any monitoring equipment; to inspect the methods of operation; and to inspect and/or copy documents, books, and papers required by the Department to be maintained. This permit condition is referenced in accordance with §§ 608 and 610(7) of the Solid Waste Management Act, 35 P.S. §§6018.608 and 6018.610(7). This condition in no way limits any other powers granted under the Solid Waste Management Act.

13. Any waste generated from the beneficial use activity authorized by this general permit shall be managed in accordance with the applicable requirements of the Solid Waste Management Act, 35 P.S. §§ 6018.101 - 6018.1003 and the regulations promulgated thereunder.
14. All activities conducted under the authorization granted in this permit shall be conducted in accordance with the permittee's application, except to the extent that there is a conflict with the regulations or governing statutes.
15. Any independent contractors or agents retained by the permittee in the completion of beneficial use activity authorized under this permit shall be subject to a compliance history review by the Department prior to performance of activities under this general permit, as specified by the Solid Waste Management Act.
16. Upon cessation of operations at the facilities operating under the authorization granted in this permit, the operator shall clean and/or remove any municipal and residual waste, storage tanks and structures or other materials that contain or have been contaminated with municipal or residual waste and shall provide for the processing and disposal of the waste or material in accordance with the Solid Waste Management Act, other environmental protection acts and the regulations promulgated thereunder.
17. The permittee must ensure that no reclaimed water is transferred and beneficially used until approval, if and to the extent required, is obtained from the applicable river basin commission. The treated effluent must meet all discharge requirements set forth by the commission, if applicable, prior to the reclaimed water being transferred or beneficially used.
18. The permittee shall not bypass any steps in the treatment process that generates treated effluent, which may become reclaimed water that is transferred for beneficial use. The treated effluent must undergo the complete treatment process before reclaimed water is transferred for beneficial use.
19. The permittee must ensure that any treated effluent meets all applicable NPDES permit conditions prior to transfer at the delivery point of the reclaimed water for beneficial use.
20. The end user electric generating facility receiving the reclaimed water may not discharge any such reclaimed water except in compliance with an NPDES permit or other water quality discharge permit authorizing such discharge.

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D. Record Keeping.

1. The permittee shall develop documents of the beneficial use of reclaimed water as follows:
 - a. For each day, the total volume of treated effluent the operation of the wastewater treatment facility sent to the facility for beneficial use.
 - b. For each day, the identity and location of each electric generating facility receiving reclaimed water and the volume of reclaimed water transferred to such electric generating facility.
 - c. The results of any sampling and monitoring of the treated effluent generated by the wastewater treatment facility.
2. All records required in this general permit shall be maintained on-site for a minimum of five years and shall be made available to the Department upon request.

F. Reporting Requirements.

1. Any person who operates under the provisions of this permit shall notify, in writing, within 15 days the Solid Waste Manager of the appropriate regional office of the Department (address in attached list) of any changes in: the name, address, owners, operators, and/or responsible officials of the company; the location of facilities; compliance status; land ownership and the right to enter and operate sites operated by the permittee; and the status of any permit issued by the Department or federal government under the environmental protection acts.
2. Any person currently operating under the provisions of this general permit must notify the Department, in writing, if the existing facility will be relocated to a new location, or if an additional facility, owned and/or operated by the permittee, will be added for coverage under this general permit. In addition to the notice, the information below must be submitted for the Department's approval.
 - a. If the existing facility will be relocated or additional facility will be located within the same Department's Regional Office having jurisdiction over the existing facility, the following conditions must be satisfied:
 - i. For a relocation, a registration fee in the amount identified in Section A (General Information) of the Form 20 (Application For A Municipal or Residual Waste General Permit) must be submitted, no less than thirty (30) working days, prior to operating the new facility.
 - ii. For an additional facility, (1) Form 20R and a registration fee in the amount identified in Section A (General Information) of the Form 20 (Application For A Municipal or Residual Waste General Permit 2540-PM-BWM0397), (2) Form GIF (General Information for a Residual or Municipal Waste Permit 2540-PM-BWM0515), and (3) Form E-GP

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(Contractual Consent of Landowner 2540-PM-BWM0217. The check shall be made payable to the "Commonwealth of Pennsylvania"

- b. If the existing facility will be relocated or additional facility will not be located within the same Department's Regional Office having jurisdiction over the existing facility, a completed set of application Forms and the registration fee as specified in Section B of this general permit must be submitted to the Department's Regional Office having jurisdiction over the (1) new setting, or (2) additional facility for its approval. No activities shall commence unless approved, in writing, by the Department. The check shall be made payable to the "Commonwealth of Pennsylvania".

G. Permit Renewal

A person or municipality that plans to continue the operations authorized under this general permit, after the expiration date indicated on the approval for coverage page, shall file a complete application for permit renewal at least 180 days before the expiration date of this general permit unless permission has been granted by the Department for submission at a later date. The renewal application shall include a completed (i) General Information Form (Authorization Application for a Residual or Municipal Waste General Permit Application), (ii) Form B (Professional Certification), (iii) Form 20 (Application for a Municipal or Residual Waste General Permit), (iv) Form 27M (Acceptance of General Permit Conditions), (v) a Renewal Permit application fee in the amount identified in Section A (General Information) of the Form 20 must be submitted to the appropriate Department Regional Office. A check shall be made payable to the "Commonwealth of Pennsylvania." A copy of the renewal application shall also be sent to the attention of the Department's Bureau of Waste Management, Division of Municipal and Residual Waste, Rachel Carson State Office Building, 400 Market Street, P.O. Box 69170, Harrisburg, PA 17106-9170.

In the event that a timely and complete application for renewal has been submitted and the Department is unable, through no fault of the permittee, to reissue the general permit or approval for coverage before its current coverage expiration date, the terms and conditions of the approved coverage will automatically continue and will remain fully effective and enforceable pending the issuance or denial of the renewal for permit coverage, provided the permittee is, and has been, operating in compliance with the terms and conditions of the general permit.

**Department of Environmental Protection
Regional Offices
(and Counties Served)**

- I. Bucks, Chester, Delaware, Montgomery, Philadelphia.

Southeast Regional Office
2 East Main Street
Norristown, PA 19401
Phone: (484) 250-5960

- II. Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton, Pike, Schuylkill, Susquehanna, Wayne, Wyoming.

Northeast Regional Office
2 Public Square
Wilkes-Barre, PA 18711-0790
Phone: (570) 826-2516

- III. Adams, Bedford, Berks, Blair, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lancaster, Lebanon, Mifflin, Perry, York.

Southcentral Regional Office
909 Elmerton Avenue
Harrisburg, PA 17110-8200
Phone: (717) 705-4706

- IV. Bradford, Cameron, Centre, Clearfield, Clinton, Columbia, Lycoming, Montour, Northumberland, Potter, Snyder, Sullivan, Tioga, Union.

Northcentral Regional Office
208 West 3rd Street - Suite 101
Williamsport, PA 17701
Phone: (570) 327-3653

- V. Allegheny, Armstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Washington, Westmoreland.

Southwest Regional Office
400 Waterfront Drive
Pittsburgh, PA 15222-4745
Phone: (412) 442-4000

- VI. Butler, Clarion, Crawford, Elk, Erie, Forest, Jefferson, Lawrence, McKean, Mercer, Venango, Warren.

Northwest Regional Office
230 Chestnut Street
Meadville, PA 16335-3481
Phone: 814-332-6848